Application Number: 10/577,055
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AMENDMENT TO THE SPECIFICATION

Please find below two marked-up paragraphs.

On page 12, lines 7-17, please amend the following:

According to another aspect of the present invention, there is provided a parallel multi-stage digital input constructor including the steps of: (a) plurality of digital input constructors receiving at least two different digital input signals, (b) the plurality of digital input constructors are placed on the same silicon substrate, featuring crosstalk between the plurality of digital input constructors, (c) a common DSP for treating the crosstalk effect, whereby each stage of each multi-stage digital input constructor comprising: amplifier amplifying an input digital signal, integration means for integrating the amplified digital signal, a synchronization clock synchronizing the multi-stage digital input constructor, ~~a comparator for comparing the integrated amplified digital signal with a threshold,~~ and adding at least one predefined correction to the amplified digital signal.

illustrating the multi-stage digital input signal constructor operation. In that second half period of synchronization clock 56, the following stage is active. In other words, the activating timing of the amplifier ~~and comparator~~ of the following stage is opposite in respect to its preceding stage. During the time that the current stage is inactive, capacitor 84 is discharged close to zero to be prepared for the next sample. During that time, the amplifier of the following stage is using voltage 76 and the capacitor of the following stage is integrating. The gain of the stage is a function of the amplifier transconductance, the capacitor and resistor values, the clock duration, similar parameters of the neighboring stages and other factor related to actual implementation. The voltage gain of a signal passing through a stage is not well defined due to the change of the shape of the signal as passing through the stages. The overall gain between each input 57 to the output 59 may be approximately determined using the method outlined above for the general MISO.